



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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OFFICE OF  
ENFORCEMENT AND  
COMPLIANCE ASSURANCE

Mr. Glen Stein  
Director  
USFS Fire and Aviation Management  
1602 Ontario Street  
Sandpoint, ID 83864

Dear Mr. Stein:

Pursuant to our responsibilities under National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Environmental Protection Agency (EPA) has reviewed the US Forest Service's (USFS) Draft Environmental Impact Statement (DEIS) for Aerial Application of Fire Retardant which proposes to continue the nationwide use of aerially delivered fire retardant. Significant issues of interest to EPA include impacts to health and human safety, water resources, aquatic habitat and air quality.

Risk to human health and the environment from crown-destroying stand fires (catastrophic fire), especially in the Western US, has increased considerably over last 50 years. This is due to prolonged drought, damage from insects and other tree diseases and the accumulation of highly combustible biomass on federal lands. Further, the wildland urban interface has dramatically increased, placing more people in the vicinity of ecosystems which depend on fire.

Data from the USFS indicate that fire retardant applied aerially, in coordination with firefighters on the ground, is the most effective way to control wildland fire, and to protect people, landscapes, and resources. Research and experience demonstrate that aerially applied fire retardant, used in an appropriate manner, reduces wildfire intensity and the rate of spread, which increases the effectiveness of our fire suppression efforts on the ground.

EPA recognizes the importance of finding a balance between the protection of human health and the environment. The DEIS points out that most wildfires are managed without the use of fire retardants. From 2000 through 2010, aerially applied retardant was used on about 8.5 percent of wildfires on National Forest System lands, and over the last ten years, on lands managed by the USFS, U.S. Department of the Interior, and the states, only one of every 5,000 retardant drops has impacted waterways.

The preferred alternative, (Alternative 3) proposes the continued Aerial Application of Fire Retardant, using 2011 Guidelines (Appendix A, DEIS) and adopting the 2008 Reasonable and Prudent Alternatives (Appendix B, DEIS). The proposed 2011 Guidelines would only allow one exception for prohibiting the aerial application of fire retardant within 300 feet of stream, and that would be to protect human life or safety. Further, Alternative 3 requires the USFS to map areas that should be avoided to provide direction to pilots regarding areas to avoid dropping fire retardant. The USFS has worked with EPA, the US Fish and Wildlife Service and other Federal agencies to develop map coverages (avoidance layers) to further protect water resources. Such areas include water bodies, designated critical habitat for threatened and endangered species, and areas occupied by locally identified candidate and sensitive species that require additional protection.

Alternative 3 also requires the USFS to monitor 5 percent of aerial applications of fire retardant on fires of 300 acres or less on each National Forest each year, and if a misapplication is reported. The DEIS states that all federal wildland fire agencies follow the Guidelines for Aerial Delivery of Retardant or Foam Near Waterways (Appendix A) to prevent application of retardant into waterways. In 2008, the USFS adopted additional measures recommended by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to avoid impacts to listed species and habitat.

EPA supports the use of the USFS's "Evaluation Process" (Chapter 3, p. 80, DEIS) and the 2007 revisions to USFS Specification 5100-304c for long term retardant, including acute toxicity testing. The process is an effective way to keep "chemicals of concern" from being added to the fire retardant formulations. We recommend that the Final EIS (FEIS) include a copy of this Specification which prohibits formulations containing polybrominated diphenyl ethers (PBDEs), and other chemicals of concern.

## Water Quality

The 2011 Forest Service Guidelines created a 300-foot buffer zone from fire retardant application on either side of any surface water. Pilots operating in compliance with these Guidelines would presumably not be discharging fire retardant into waters of the United States and therefore a Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit would not be required<sup>1</sup>. While NPDES permits are not required for operators that are not discharging into waters of the US, we recommend that the FEIS include a discussion of relevant CWA Water Quality Standards (WQSs) and evaluate the potential for aerial application of fire retardant to contribute to exceedances of WQSs, including water quality criteria to protect designated beneficial uses of surface waters (e.g., aquatic life uses, drinking water, irrigation, and primary contact recreation). In addition, recent scientific research has shown that lower levels of nitrogen and phosphorus can cause adverse developmental impacts to aquatic life. Our staff is able to provide you with additional information on the potential impacts of nitrogen and phosphorous to aquatic resources.

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<sup>1</sup> Note that while the Ninth Circuit in League of Wilderness Defenders et al. v. Forsgren (Forsgren) held that the direct application of pesticides to waters of the United States to control Douglas Fir Tussock Moths in National Forest lands required an NPDES permit (309 F.3d 1181 (9<sup>th</sup> Cir. 2002)), fire retardants were not an issue in that case and were not discussed in that holding.

## Air Quality


EPA recognizes the enormous variation among fire events and the difficulty with predicting air quality impacts from the use of aerial fire retardant and the indirect impacts from fires they are used to control. While there are clearly many variables that impact outcomes, we recommend that the FEIS provide analyses that would allow for comparisons between catastrophic and retardant controlled fire events. In addition, we also recommend that the FEIS consider the development of a monitoring program that would measure air quality impacts from fire events, with and without the use of retardant, to measure benefits and trends. For example, a monitoring program could compare a catastrophic fire event to a controlled by retardant event, and measure ash level, damage to soil, time for smoke to dissipate, and other relevant criteria. We also recommend that the FEIS identify the supporting data for the conclusions that the retardant is not in the air longer than a minute, precluding drift and impacts to non-target areas and that volatilization of nitrogen in the retardant, resulting in nitrous oxide emissions, would be offset by nitrogen in vegetation not burned.

Based on our review, EPA has assigned a rating of EC-2 (Environmental Concerns - Insufficient Information) (see enclosed "Summary of Rating Definitions and Follow-up Actions") to the preferred alternative. This alternative has included protections to water quality, air quality and other natural resources. However, we recommend that additional information requested earlier be provided in the FEIS to support the predications and conclusions related to impacts to water and air quality.

EPA appreciates the opportunity to submit comments on the DEIS and commends the USFS for early interagency cooperation in the scoping process and with the development of the DEIS. We welcome the chance to continue working with the USFS as it completes the FEIS. Please feel free to contact me at (202) 564-5400, or have your staff contact Elaine Suriano at (202) 564-7162 if you have any questions or would like to discuss our comments.

Sincerely,



 Susan E. Bromm  
Director  
Office of Federal Activities

Enclosure

## **U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements**

### **Definitions and Follow-Up Action\***

#### **Environmental Impact of the Action**

**LO - - Lack of Objections:** The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC - - Environmental Concerns:** The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO - - Environmental Objections:** The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU - - Environmentally Unsatisfactory:** The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

#### **Adequacy of the Impact Statement**

**Category 1 - - Adequate:** EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 - - Insufficient Information:** The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 - - Inadequate:** EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.